

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Appellants : Manabu Iwamoto, et al.
Serial No. : 10/543,051
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For : METHOD AND SYSTEM FOR SUPPLYING INK AND INK
CONTAINER
Examiner : Culler, Jill E.
Art Unit : 2854
Confirmation No. : 5677

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**REQUEST FOR REHEARING
PURSUANT TO 37 C.F.R. § 41.52**

Applicants respectfully request, pursuant to 37 C.F.R. § 41.52, rehearing following the Board's decision dated May 28, 2010 ("Decision") newly rejecting claims 7, 9, 11 and 12. The bases for this request that the proceeding be reheard under § 41.52 is to address in the new grounds of rejection the points believed to have been misapprehended or overlooked in entering the new grounds of rejection. § 41.50(b)(2).

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SUMMARY

Claims 7 and 9

The Board has entered a new ground of rejection rejecting claims 7 and 9 under 35 U.S.C. 112, second paragraph as indefinite. With respect to this rejections, Appellants respectfully urge that the Board failed to appreciate that the specification amply described structure of an ink container recognition means such that ordinarily skilled artisan would understand what structure must perform the function recited in the means-plus-function limitation (e.g., implemented by or on a computer), assuming such an interpretation of the limitation. Accordingly, rehearing should be granted with respect to claims 7 and 9.

Claims 11 and 12

The Board has also newly rejected claim 11 under 35 U.S.C. 112, first paragraph as a non-enabled single means claim of undue breadth. Claim 12 is rejected on the same basis as a depending from claim 11. Appellants respectfully urge that the Board failed to consider that (1) “**an ink container...comprising storage means** [which is “provided on the ink container”] which stores the numeric information for setting an inkless time corresponding to the time corresponding to the ink therein,” **does** appear in combination with another recited element, and cannot be a single means claim and (2) as a matter of law, the Board's position that a means-plus-function clause “covers any conceivable means for achieving the stated result” at page 6 is legally incorrect as by statutory definition, a claim construed under paragraph 6 **cannot** be construed to “cover[] any conceivable means for achieving the stated result,” and is not therefore unduly broad. Accordingly, rehearing should be granted with respect to claims 11 and 12.

DISCUSSION

Claims 7 and 9

The Board has entered a new ground of rejection rejecting claims 7 and 9 under 35 U.S.C. 112, second paragraph as indefinite. Claims 7 and 9 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to distinctly claim the subject matter which Appellants regard as their invention.

Claim 7 recites:

7. (Previously Presented) An ink supply system, comprising:

an ink supply means which supplies ink in an ink container to an ink fountain where the ink is temporarily stored between a first point in time when the ink is discharged from the ink container and a second point in time when the ink is supplied to an inner peripheral surface of a printing drum;

an ink amount detecting means which outputs an ink supply starting signal when the amount of ink in the ink fountain supplied by the ink supply means becomes smaller than a predetermined first threshold value and an ink supply terminating signal when the amount of ink in the ink fountain becomes not smaller than a predetermined second threshold value;

a time measuring means which measures an elapsed time from the time the ink supply starting signal is output from the ink amount detecting means;

an empty ink container recognizing means which recognizes that the ink container is exhausted when the elapsed time measured by the time measuring means becomes longer than a predetermined inkless time before the ink supply terminating signal is output; and

an ink supply control means which starts the ink supply means supplying the ink in response to the ink supply starting signal and stops the ink supply means from supplying the ink in response to the ink supply terminating signal,

wherein the improvement comprises that the empty ink container recognizing means reads out numeric information from a storage

means which is provided on the ink container to store numeric information for setting an inkless time corresponding to the kind of ink in the ink container, and sets the inkless time on the basis of the numeric information.

The Board rejects the claims on the basis that the recitation of “empty ink container recognizing means which recognizes that the ink container is exhausted,” and which “reads out information from a storage means,” is indefinite. The “empty ink container recognizing means which recognizes that the ink container is exhausted,” and which “reads out information from a storage means,” has been construed as a “means plus function” limitation. The Board reasons:

Turning to the present Specification, we find no disclosure of any underlying structure corresponding to the recited function set forth in claim 7 directed to recognizing that the ink container is exhausted and directed to reading out numeric information from a storage means. The text of the Specification does nothing more than employ the identical language appearing in claim 7. (Spec., *passim*). The drawings are equally unavailing, illustrating this means in the form of a black box labeled “60”, having the claim term “empty ink container recognizing means” appearing therein. (See, e.g., Fig. 1). Accordingly, we find that this means-plus-function limitation of claim 7 lacks sufficient corresponding structure under 35 U.S.C. § 112, sixth paragraph. As such, claim 7, and claim 9 depending therefrom, are indefinite under 35 U.S.C. § 112, second paragraph. See *In re Donaldson*, 16 F.3d 1189, 1195 (Fed. Cir. 1994) (en banc); *Aristocrat Technologies v. IGT*, 521 F.3d 1328, 1331 (Fed. Cir. 2008). Decision, page 5.

Assuming for the sake of argument that the claim is properly construed under 35 USC 112, sixth paragraph, Appellants note that the specification does show structure for the claimed element. At page 5, line 31 to page 8 line 8, the specification states:

The ink supply system 1 comprises an ink supply means 30 which supplies ink discharged from an ink container 10 inside a printing drum 20, ...a time measuring means 50 which measures the elapsing time from the time the ink supply starting signal is output from the ink amount detecting means 40, **an empty ink container**

recognizing means 60 which recognizes that the ink container 10 is exhausted when the elapsing time measured by the time measuring means becomes longer than a predetermined inkless time before the ink supply terminating signal is output....

A storage means 8 which stores a parameter representing an inkless time corresponding to the kind of the ink in the ink container 10. **The storage means 8 comprises a memory IC 81 forming a non-volatile memory (e.g., an EEPROM) which can hold data for a predetermined time without power supply, and a contact 83 is provided on the tip of a board 82 on which the memory IC 81 is mounted.**

A connector 9 which is to be electrically connected to the contact 83 of the storage means 8 of the ink container 10 is provided near the ink supply means 30 of the ink supply system 1. **And the connector 9 and the empty ink container recognizing means 60 are connected to each other so that the parameter representing the inkless time stored in the storage means 8 is read out by the empty ink container recognizing means 60.**

And later at page 9, lines 15 to31:

[0035] **The time measuring means 50 measures the elapsing time from the time the ink supply starting signal is input and outputs the elapsing time to the empty ink container recognizing means 60 in real time. The empty ink container recognizing means 60 recognizes that the ink container 10 is exhausted** when the elapsing time input from the time measuring means 50 becomes longer than a predetermined inkless time before the amount of ink in the ink fountain 2 reaches the second threshold value and outputs the signal representing the fact. The inkless time which has been set in advance in the empty ink container recognizing means 60 is set in the following manner.

[0036] That is, when the ink container 10 is connected to the ink supply means 30 shown in FIG. 2, **the connector 9** provided in the vicinity of the ink supply means 30 and the contact 83 of the storage means 8 provided on the ink container 10 are electrically connected to each other, **whereby the parameter representing the inkless time stored in the storage means 8 is read out by the empty ink container recognizing means 60** and the inkless time is set on the basis of the parameter.

And finally at page 13, lines 6-15, the specification states:

Though, in the embodiment described above, a parameter representing the inkless time corresponding to the kind of ink is stored in the memory 81 of the storage means, **the inkless time may be recorded as a bar code.**

Otherwise, the inkless time may be recorded as a letter or a symbol. **The correction table such as shown in Figure 4 or 5 may be stored in memory IC 81 of the storage means so that the empty ink container recognizing means 60 sets the inkless time referring to the correction table.**

The specification clearly indicates that the ink container recognition means is a device that can electrically connect to a memory and read out information – a parameter stored in memory – from that memory, as well as set a time by referring to a correction table. Hence it is clear that it is a computer or computer module.

As explained at M.P.E.P. §2181 III,: “[t]he following guidance is provided to determine whether applicant has complied with the requirements of 35 U.S.C. 112, second paragraph, when 35 U.S.C. 112, sixth paragraph, is invoked: (A) If the corresponding structure, material or acts are described in the specification in specific terms (e.g., an emitter-coupled voltage comparator) **and one skilled in the art could identify the structure, material or acts from that description**, then the requirements of 35 U.S.C. 112, second and sixth paragraphs are satisfied. See *Atmel*, 198 F.3d at 1382, 53 USPQ2d 1231.”

Ordinarily skilled artisans would be well aware of the devices in , for example, stencil printers that “recognize that the ink container is exhausted,” and which “reads out information from a storage means,” where that information is read out of memory IC or in connection with a bar code or symbol reader. As explained in M.P.E.P. 2181 III:

- (1) If one skilled in the art would be able to identify the structure, material or acts from the description in the specification for performing the recited function, then the requirements of 35 U.S.C. 112, second paragraph, are satisfied. See *Dossel*, 115 F.3d at 946-47, 42 USPQ2d at 1885 (The function recited in

the means-plus-function limitation involved "reconstructing" data. The issue was whether the structure underlying this "reconstructing" function was adequately described in the written description to satisfy 35 U.S.C. 112, second paragraph. The court stated that "[n]either the written description nor the claims uses the magic word 'computer,' nor do they quote computer code that may be used in the invention. Nevertheless, when the written description is combined with claims 8 and 9, the disclosure satisfies the requirements of Section 112, Para. 2." The court concluded that based on the specific facts of the case, one skilled in the art would recognize the structure for performing the "reconstructing" function since "a unit which receives digital data, performs complex mathematical computations and outputs the results to a display must be implemented by or on a general or special purpose computer." See also *Intel Corp. v. VIA Technologies, Inc.*, 319 F.3d 1357, 1366, 65 USPQ2d 1934, 1941 (Fed. Cir. 2003) (The "core logic" structure that was modified to perform a particular program was held to be adequate corresponding structure for a claimed function although the specification did not disclose internal circuitry of the core logic to show exactly how it must be modified.)

Emphasis added. Appellants urge that the Board failed to appreciate that the specification amply described structure of an ink container recognition means such that ordinarily skilled artisan would understand what structure must perform the function recited in the means-plus-function limitation (e.g., implemented by or on a computer), assuming such an interpretation of the limitation, and hence would be clear. Accordingly, rehearing should be granted with respect to claims 7 and 9.

Claims 11 and 12

The Board has also rejected claims 11 under 35 U.S.C. 112, first paragraph as a non-enabled single means claim of undue breadth. Claim 12 is rejected on the same basis as a depending from claim 11. Claim 11 recites:

11. An **ink container** which is used for carrying out an ink supply method where supply of ink from an ink container to an ink

fountain where the ink is temporarily stored between a first point in time when the ink is discharged from **an ink container** and a second point in time when the ink is supplied to the inner peripheral surface of a printing drum is started when the amount of ink in the ink fountain becomes smaller than a first threshold value and is terminated when the amount of ink in the ink fountain becomes not smaller than a second threshold value after the supply of ink is started, the elapsed time from the start of the supply of ink is measured, it is recognized that **the ink container** is exhausted when the measured elapsed time from the start of the supply of ink becomes longer than a predetermined inkless time before the amount of ink in the ink fountain becomes not smaller than the second threshold value after the supply of ink is started, a numeric information is read out from **a storage means which is provided on the ink container** to store a numeric information for setting an inkless time corresponding to the kind of ink in **the ink container**, and the inkless time is set on the basis of the numeric information, comprising a storage means which stores the numeric information for setting an inkless time corresponding to the kind of ink therein.

Regarding this rejection, the Board has made errors of law.

First, as explained in MPEP 2164.08, “a single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under **35 U.S.C. 112**, first paragraph. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.)” Claim 11 does not recite a “single means” but recites a combination, the combination including “**an ink container...comprising storage means** [which is “provided on the ink container”] which stores the numeric information for setting an inkless time corresponding to the time corresponding to the ink therein.” Thus the alleged means recitation means recitation **does** appear in combination with another recited element. See *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983), M.P.E.P. §2164.08(a).

Moreover, the Board has also found claim 11 to invoke 35 U.S.C. §112, sixth paragraph. Thus, as a matter of law, the Board's position that the above-noted means-plus-function clause "covers any conceivable means for achieving the stated result" at page 6 is legally incorrect. 35 U.S.C. § 112, paragraph 6 expressly provides that an element of a claim expressed in means-plus-function format covers only the corresponding structure, material, or acts described in the specification and equivalents thereof. "Per our holding, the 'broadest reasonable interpretation' that an examiner may give means-plus-function language is that statutorily mandated in paragraph six. Accordingly, the PTO may not disregard the structure disclosed in the specification corresponding to such language when rendering a patentability determination." *In re Donaldson*, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1848-50 (Fed. Cir. 1994). Thus by statutory definition, the claim be construed under paragraph 6 cannot be construed to "cover[] any conceivable means for achieving the stated result," and is not therefore unduly broad.

Accordingly, Appellants request rehearing because they believe that the Board failed to consider that (1) "an ink container...comprising storage means [which is "provided on the ink container"] which stores the numeric information for setting an inkless time corresponding to the time corresponding to the ink therein," does appear in combination with another recited element, and cannot be a single means claim and (2) as a matter of law, the Board's position that the above-noted means-plus-function clause "covers any conceivable means for achieving the stated result" at page 6 is legally incorrect as by statutory definition, a claim construed under paragraph 6 cannot be construed to "cover[] any conceivable means for achieving the stated result," and is not therefore unduly broad. Accordingly, rehearing should be granted with respect to claims 11 and 12.

CLOSING

Appellants submit that rehearing should be granted to address the issues discussed above.

Respectfully submitted,

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